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## CLAIMS

1. A compound characterized in that it is chosen from:

- 5 - the peptide represented by the sequence SEQ ID No: 1 below:

10 SEQ ID No: 1 Lys-Ala-Lys-Pro-Val-Gln-Lys-Leu-Asp-Asp-Asp-Asp-Gly-Asp-Asp-Thr-Tyr-Lys-Glu-Glu-Arg-His-Asn-Lys

and also:

- 15 - the homologs of this peptide exhibiting at least 60% similarity with the sequence SEQ ID No: 1 and comprising from 15 to 40 amino acids,

- 20 - the derivatives of this peptide selected from:  
- the pharmaceutically acceptable salts of this peptide,  
- the functional fragments of this peptide,  
- the chemical analogs of this peptide, chosen from those in which: one or more amino acids of the peptide sequence have been replaced with their  
25 D enantiomer; one or more amide peptide linkages (-CO-NH-) have been replaced with an isosteric linkage such as: -CH<sub>2</sub>NH-, CH<sub>2</sub>S-, -CH<sub>2</sub>CH<sub>2</sub>-, -CH=CH- (cis and trans), -COCH<sub>2</sub>-, -CH(OH)CH<sub>2</sub>- and -CH<sub>2</sub>SO-; one or more amino acids have been replaced with a  
30 non-natural amino acid,

- 35 - the chemical derivatives of this peptide, chosen from: des-alpha amino peptide compounds; substituted N-alpha acyl derivatives of the form RCO-, in which R represents an alkyl, alkenyl, alkynyl, aryl or aralkyl group, that is linear, branched or cyclic, comprising from 1 to 50 carbon atoms; derivatives substituted on the C-terminal acid function with a group chosen from -NH<sub>2</sub>, and

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- alkyloxy, alkylthio or alkylamino of the form -OR, -SR or -NHR, in which R represents an alkyl, alkenyl, alkynyl or aryl chain or an aralkyl group, that is linear, branched or cyclic, comprising from 1 to 50 carbon atoms, derivatives carrying a pharmacophore substituent, polymers of this peptide.
- 5
2. The peptide as claimed in claim 1, characterized in that it exhibits at least 70% similarity with the sequence SEQ ID No: 1, even more preferentially 80%, preferably at least 90%, and even more favorably at least 95%, or better still 98%, similarity with the sequence SEQ ID No: 1.
- 10
3. The peptide as claimed in claim 2, characterized in that it comprises from 20 to 30 amino acids.
- 15
4. The peptide as claimed in claim 1, characterized in that it is a function fragment of the peptide SEQ ID No: 1 capable of inducing an immune response.
- 20
5. A peptide comprising at most 100 amino acids, characterized in that it comprises a sequence as claimed in claim 1, chosen from: SEQ ID No: 1, a function fragment of SEQ ID No: 1, a homolog of SEQ ID No: 1, a chemical analogue of SEQ ID No: 1 or a chemical derivative of SEQ ID No: 1.
- 25
6. A protein comprising a peptide as claimed in any one of claims 1 to 5, coupled to a carrier protein.
- 30
7. An antibody characterized in that it recognizes a peptide as claimed in any one of claims 1 to 5 or a protein as claimed in claim 6.
- 35
8. The antibody as claimed in claim 7, characterized

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in that it is directed against the peptide of sequence SEQ ID No: 1.

9. The antibody as claimed in claim 7 or claim 8,  
5 characterized in that it is a polyclonal antibody.
10. The antibody as claimed in claim 7 or 8,  
characterized in that it is a monoclonal antibody.
- 10 11. A fragment or derivative of an antibody as claimed  
in any one of claims 7 to 10, characterized in  
that it is chosen from Fab, F(ab')<sub>2</sub> and ScFv  
fragments.
- 15 12. A nucleic acid characterized in that it encodes a  
peptide as claimed in any one of claims 1 to 5 or  
a protein as claimed in claim 6.
13. A vector characterized in that it comprises a  
20 nucleic acid as claimed in claim 12.
14. A recombinant cell comprising a nucleic acid or a  
vector as claimed in either one of claims 12 and  
13.
- 25 15. A nonhuman transgenic organism comprising a  
nucleic acid as claimed in claim 12 in its cells.
16. A nucleotide probe or primer characterized in that  
30 it comprises a nucleic acid as claimed in claim  
12.
17. The use of a probe or of a primer as claimed in  
claim 16, for detecting, in vitro, the presence of  
35 pathogenic leptospiral strains in a biological  
sample or contaminated water.
18. The use of an antibody as claimed in any one of  
claims 7 to 11, for detecting, in vitro, the

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presence of pathogenic leptospiral strains in a biological sample or contaminated water.

19. The use of a peptide as claimed in any one of  
5 claims 1 to 5 or of a protein as claimed in claim  
6, for detecting, *in vitro*, the presence of anti-  
leptospiral antibodies in a biological sample.
20. A kit for detecting, *in vitro*, the presence of  
10 pathogenic leptospiral strains in a biological  
sample or contaminated water, characterized in  
that it comprises a probe or an oligonucleotide or  
a pair of primers as claimed in claim 16.
- 15 21. A pharmaceutical composition comprising a peptide  
or a protein or an antibody or a nucleic acid as  
claimed in any one of claims 1 to 12, and a  
pharmaceutically acceptable support.
- 20 22. The composition as claimed in claim 21,  
characterized in that it is a vaccine.
23. The composition as claimed in claim 21,  
25 characterized in that it is a preparation of  
anti-PP antibodies for therapeutic use.
24. The use of a nucleic acid or of a vector as  
claimed in either one of claims 12 and 13, for the  
30 *in vitro* production of a peptide as claimed in  
any one of claims 1 to 5 or of a protein as claimed in  
claim 6.
25. The use of a nucleic acid or of a vector as  
35 claimed in either one of claims 12 and 13, for the  
*ex vivo* production of a peptide as claimed in any  
one of claims 1 to 5 or of a protein as claimed in  
claim 6.